

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 August 2004 (19.08.2004)

PCT

(10) International Publication Number
WO 2004/070284 A1

(51) International Patent Classification: **F24F 3/147**

Hwangto Apt. 202-303, Daebang-Dong, Changwon,
Kyungsangnam-Do 641-100 (KR).

(21) International Application Number:

PCT/KR2003/000236

(74) Agent: **PARK, Jang-Won**; Jewoo Bldg. 5th Floor, 200,
Nonhyun-Dong, Gangnam-Ku, Seoul 135-050 (KR).

(22) International Filing Date: 3 February 2003 (03.02.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **LG
ELECTRONICS INC.** [KR/KR]; 20, Yoido-Dong,
Youngdungpo-Gu, Seoul 150-010 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEE, Seong-Hwan**
[KR/KR]; Wooseong Apt. 102-1303, Namyang-Dong,
Changwon, Kyungsangnam-Do 641-091 (KR). **SHIN,
Soo-Yeon** [KR/KR]; Booyoung Apt. 1202-902, Wolsan
maeul, Boogok-Li, Jangyu-Myeon, Gimhae, Kyungsang-
nam-Do 621-833 (KR). **CHO, Min-Chul** [KR/KR];
812-8, 2/3, Mandeok 1-Dong, Buk-Gu, Busan 616-110
(KR). **LEE, Sung-Hwa** [KR/KR]; Towol Sungwon Apt.
503-402, Sangnam-Dong, Changwon, Kyungsangnam-Do
641-781 (KR). **LEE, Kwang-Won** [KR/KR]; Digital

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VC, VN, YU, ZA, ZM, ZW.

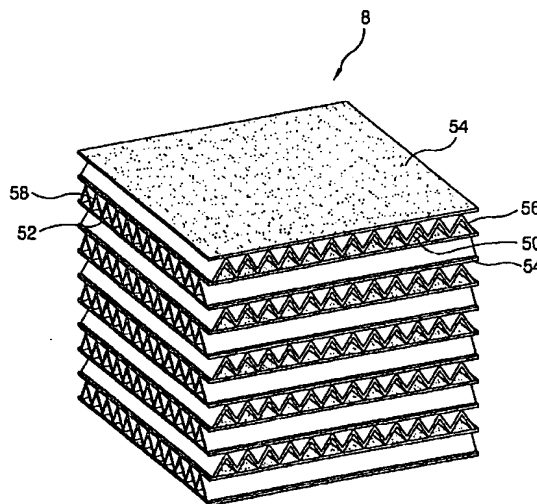
(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,
SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: **HEAT EXCHANGER OF VENTILATING SYSTEM**



(57) Abstract: A heat exchanger of a ventilating system includes: heat exchange plates laminated with regular intervals so that a first air passage through which indoor air being discharged to outside of a building passes and a second air passage through which outdoor air being introduced into the interior of the building passes are sequentially formed; first corrugation plates attached to the first air passage and obtaining a space to allow outdoor air to pass therethrough; and second corrugation plates attached to the second air passage and obtaining a space to allow outdoor air to pass therethrough, wherein the heat exchange plates are made of a paper material with numerous fine holes that are able to generate a capillary phenomenon. A sensible heat exchange and a latent heat exchange are possible to minimize a change in a temperature and moisture.

WO 2004/070284 A1